transmission is reconstructable into the encoded linear matrix image 4. At 210, the binary data 2 (again, after optional addition 204 and/or encryption 206) is encoded into the linear matrix image 4 according to the encoding parameters 30. At 212, the encoded linear matrix image 4 is electronically stored as an image file. At 214, the image file is associated with a web page 36, and the method 200 concludes.

Considering now in further detail the defining 208 of the encoding parameters 30, and with reference to FIG. 11, at 222 image-distortion characteristics 32 of the image data channel 40 are identified. At 224, encoding parameters 30 indicative of the size and set of colors for individual regions 80 of the linear matrix image 4 which are representative of portions of the binary data 2 are determined from the image distortion characteristics 32. Then the defining 208 concludes.

Considering now in further detail the encoding 210 of the binary data, and with reference to FIG. 12, at 232 a first subset of regions 82 of color markings forming a detection key 84 in a header section 4a of the encoded linear matrix image 4 is provided, the size and set of colors for the first subset of regions selected such that the detection key 84 is detectable after transmission over a variety of image data channels 40. At 234, a second subset of regions 82 of color markings forming a tuning pattern 86 in the header section 4a is provided, the size and set of colors for the second subset of regions usable for defining image-distortion characteristics 32 of the image data channel 40. At 236, a third subset of the header section 4a is formed by encoding one or more encoding parameters 30 into an encoding parameter images 88 subset of regions 82 of color

markings, the size and set of colors for the regions selected such that the encoding parameters 30 are recoverable after transmission over a variety of image data channels 40. At 238, a fourth subset of the header section 4a is formed by encoding a peripheral key 92 into a fourth subset of regions 82 of color markings, the peripheral key 92 indicative of a particular set of peripheral devices 130 for which the binary data 2 is intended. At 240, a fifth subset of the header section 4a is formed by encoding textual information into a region of human-readable alphanumeric characters 90. At 242, a data section 4b of the encoded linear matrix image 4 is formed by encoding the binary data 2 (including any addition 204 of redundant data and/or encryption 206) into regions 80 of color markings according to the encoding parameters 30. The encoding parameters 30 determine the size and color of each region 80 in the data section 4b. Then the encoding 210 concludes.

A further embodiment of the present invention, as best understood with reference to FIG. 13, is a method 300 of recovering binary data 2 encoded in an linear matrix image 4 that is received over an image data channel as a received linear matrix image 6. At 302, the received matrix image 6 is received from an image data channel 40. At 304, the received linear matrix image 6 is detected by recognizing a detection key 84 in a header section 6a of the received matrix image 6. At 306, the received matrix image 6 is segregated from other data received from the image data channel 40. At 308, the header section 6a is analyzed to determine image-distortion characteristics 32 of the image data channel 40 by comparing a tuning pattern portion 86 of the header section 6a to a known tuning pattern. At 310, the header section 6a is decoded according to the image-distortion

characteristics 32 in order to recover encoding parameters 30. At 312, a data section 6b of the received matrix image 6 is decoded according to the encoding parameters 30 in order to form recovered binary data 8. If the binary data 2 in the encoded linear matrix image 4 had been encrypted prior to transmission over the image data channel 40, then at 314 the recovered binary data 8 is decrypted using an encryption key included as one of the encoding parameters 30. At 316, the recovered binary data 2 is utilized. Then the method 300 concludes.

From the foregoing it will be appreciated that the system and methods provided by the present invention represent a significant advance in the art. Although several specific embodiments of the invention have been described and illustrated, the invention is not limited to the specific methods, forms, or arrangements of parts so described and illustrated. The invention is limited only by the claims.